

REMARKS

Applicants have received and reviewed the Office Action dated November 13, 2008. By way of response, Applicants have amended claims 1-11 and 17. No new matter has been added. Claims 1-11 and 17 are pending. Applicants submit the amended claims are supported by the specification as filed.

In particular, support for the recitation of “crosslinkable high pressure” can be found in the specification as filed at least at page 2, line 30.

Applicants respectfully submit that the pending claims are in condition for allowance, and notification to that effect is earnestly solicited.

Allowable Subject Matter

The Examiner indicated that claim 17 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Amended claim 17 includes the subject matter of claim 1. Applicants respectfully submit that claim 17 is in condition for allowance, and notification to that effect is earnestly solicited.

Objections to Claims

The Examiner objected to claims 2-8, 10-11 and 17 for minor informalities. These claims have been amended as suggested by the Examiner. Claim 11 was also amended to correct a minor typographical error. Applicants respectfully request withdrawal of the objections.

Rejection of Claims Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1-11 under 35 U.S.C. 103(a) as obvious over Borke et al., US 2005/0049343 in view of Swarbrick et al., US 4,117,195. The Examiner rejected claims 1-11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Keogh, US 4,707,520 in view of Swarbrick et al., US 4,117,195. Applicants respectfully traverse this rejection.

Claim 1 relates to a pipe made of a crosslinkable polyethylene composition which contains a crosslinkable high-pressure ethylene-silane copolymer. The ethylene-silane

copolymer has a silane content of about 0.1 to 10 wt.-%, a density of >925 kg/m³, and also includes a silanol condensation catalyst. The claimed ethylene-silane copolymer made by copolymerizing ethylene and silane monomers which is very different from a grafted polymer (p. 4, lines 4-7) due to the term "crosslinkable high-pressure ethylene-silane copolymer resin".

As used in the present claims, the phrase "ethylene-silane copolymer" denotes a copolymer obtained by copolymerizing ethylene and silane monomers in a high-pressure process.

In contrast, the primary Borke reference describes polyethylene resins for wire and cable applications with high abrasion resistance. Pipes are not mentioned. Borke discloses two resins, each of which is different from the polymer recited in claim 1. The first resin is a blend of bimodal HDPE with an ethylene-silane copolymer (obtained by copolymerization), the latter having a silane content of 0.1 to 20 wt.% (the Borke reference at p. 1 [0010] of). The density of the ethylene-silane copolymer is only disclosed in example 1 being 922.5 kg/m³ (the Borke reference at p. 5 [0060]). Thus, this resin does not fulfill the requirements of claim 1 of the present invention. The second resin is a silane grafted bimodal HDPE having a silane content of 0.1 to 20 wt.% and a density of 940 to 960 kg/m³ is described (the Borke reference at p. 2 [[0024]]). Thus, this resin does also not fulfill the requirements of claim 1 of the present invention. Thus, Borke does also not disclose a "non-grafted EVS" with a density of >925 kg/m³.

By way of further contrast, the primary Keough reference describes silane containing polymers obtained with one of the following three methods (column 3, lines 45-55):

- A) "Reacting a thermoplastic polymer with an appropriate vinyl silane in the presence of an organic peroxide" (= grafted polymer)
- B) Reacting olefinic monomer with an appropriate unsaturated silane in the presence of peroxide (= copolymer obtained by copolymerization)
- C) Reacting a thermoplastic polymer with a silane sulfonyl azide (= grafted polymer).

Only polymers obtained by method B) are high pressure ethylene silane copolymers as required by claim 1. However, the high pressure polymers disclosed in the Keough reference is distinct from the polymer recited in claim 1. This is shown in the Keough reference at column 4,

line 63 to column 6, line 8, which provides additional disclosure of method B). A density is not disclosed therein. The densities disclosed in column 4, lines 38 and 53 refer to the silane-free polymers prior to grafting by method A) and , thus, do not characterize the ethylene silane copolymer obtained by polymerization. In the examples of Keough only silane grafted polymers were used whereby no density is given. Hence, Keough does not disclose an ethylene-silane copolymer as required by claim 1.

The secondary Swarbrick reference does not remedy the shortcomings of either of the primary references. The Swarbrick reference discloses silane-grafted polyethylenes. Ethylene-silane copolymers obtained by copolymerising ethylene and silane monomer units, herein later referred to as "non-grafted EVS", is not disclosed in Swarbrick, let alone any density thereof.

Furthermore, the improved pressure stability of pipes comprising an ethylene-silane copolymer obtained by copolymerization and having a density of >925 kg/m³ could also not be foreseen from the prior art for the following reasons. Borke and Keough do not discloses pipes at all. Swarbrick discloses pipes made of silane grafted resins whereby the pressure stability of said pipes is not an issue in Swarbrick. Thus, Swarbrick does not give any hint which properties influence the pressure stability of pipes. Hence, Swarbrick does not remedy the shortcomings of either primary reference.

Accordingly, based on the foregoing differences, Applicants respectfully submit that the references cited in these rejections neither teach nor suggest the presently claimed pipe, and withdrawal of these rejections is earnestly solicited.

Summary

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

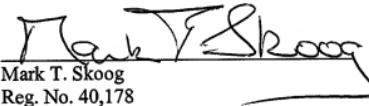
Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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